

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference BET 01/0380	FOR FURTHER ACTION	see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.
International application No. PCT/IB 01/00749	International filing date (day/month/year) 03/05/2001	(Earliest) Priority Date (day/month/year) 03/05/2000
Applicant INSTITUT CURIE et al.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 5 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).
- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :
 - contained in the international application in written form.
 - filed together with the international application in computer readable form.
 - furnished subsequently to this Authority in written form.
 - furnished subsequently to this Authority in computer readable form.
 - the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
 - the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished
- 2. **Certain claims were found unsearchable** (See Box I).
- 3. **Unity of invention is lacking** (see Box II).
- 4. With regard to the **title**,
 - the text is approved as submitted by the applicant.
 - the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

- the text is approved as submitted by the applicant.
- the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

- as suggested by the applicant.
- because the applicant failed to suggest a figure.
- because this figure better characterizes the invention.

1

None of the figures.

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 C12N15/10 C12N15/90 A61K48/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12N A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

WPI Data, PAJ, CAB Data, STRAND, BIOSIS, EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	<p>BIET ELODIE ET AL: "Stimulation of RecA-mediated D-loop formation by oligonucleotide-directed triple-helix formation: Guided homologous recombination (GOREC)." <i>BIOCHEMISTRY</i>, vol. 40, no. 6, 13 February 2001 (2001-02-13), pages 1779-1786, XP002175996 ISSN: 0006-2960 the whole document</p> <p>----</p> <p style="text-align: center;">-/--</p>	1-21

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

28 August 2001

Date of mailing of the international search report

06/09/2001

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
 NL - 2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
 Fax: (+31-70) 340-3016

Authorized officer

Hornig, H

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	H.B. GAMPER ET AL.: "Strand invasion of supercoiled DNA by oligonucleotides with a triplex guided sequence" J. AM. CHEM. SOCIETY, vol. 120, 1998, pages 2182-2183, XP002151265 AMERICAN CHEMICAL SOCIETY, US cited in the application the whole document ---	
A	CULVER KENNETH W ET AL: "Correction of chromosomal point mutations in human cells with bifunctional oligonucleotides." NATURE BIOTECHNOLOGY, vol. 17, no. 10, October 1999 (1999-10), pages 989-993, XP002151266 ISSN: 1087-0156 cited in the application the whole document ---	
A	CHAN PHILLIP P ET AL: "Targeted correction of an episomal gene in mammalian cells by a short DNA fragment tethered to a triplex-forming oligonucleotide." JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 274, no. 17, 23 April 1999 (1999-04-23), pages 11541-11548, XP002151267 ISSN: 0021-9258 cited in the application the whole document ---	
A	WO 96 41008 A (UNIV YALE ;ONCORPHARM INC (US)) 19 December 1996 (1996-12-19) cited in the application the whole document ---	
A	WO 00 09755 A (PANGENE CORP) 24 February 2000 (2000-02-24) the whole document ---	
A	COLE-STRAUSS ALLYSON ET AL: "Targeted gene repair directed by the chimeric RNA/DNA oligonucleotide in a mammalian cell-free extract." NUCLEIC ACIDS RESEARCH, vol. 27, no. 5, 1 March 1999 (1999-03-01), pages 1323-1330, XP002151268 ISSN: 0305-1048 the whole document ---	
A	WO 96 40271 A (UNIV YALE) 19 December 1996 (1996-12-19) the whole document ---	
		-/-

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 96 40711 A (MICROPROBE CORP) 19 December 1996 (1996-12-19) the whole document ---	
A	ESCUDE CHRISTOPHE ET AL: "Padlock oligonucleotides for duplex DNA based on sequence-specific triple helix formation." PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES, vol. 96, no. 19, pages 10603-10607, XP002151269 Sept. 14, 1999 ISSN: 0027-8424 cited in the application the whole document -----	

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB 01/00749

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:

Although claim 21 is directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
 No protest accompanied the payment of additional search fees.

Information on patent family members

PCT/IB 01/00749

Patent document cited in search report	Publication date	Patent family member(s)			Publication date
WO 9641008	A 19-12-1996	US 5776744 A			07-07-1998
		AU 6099596 A			30-12-1996
		EP 0871771 A			21-10-1998
WO 0009755	A 24-02-2000	US 6074853 A			13-06-2000
		AU 5774899 A			06-03-2000
		EP 1105472 A			13-06-2001
WO 9640271	A 19-12-1996	AU 6328696 A			30-12-1996
WO 9640711	A 19-12-1996	US 5849482 A			15-12-1998
		AU 709924 B			09-09-1999
		AU 6103596 A			30-12-1996
		CA 2223584 A			19-12-1996
		EP 0842186 A			20-05-1998
		JP 11509528 T			24-08-1999
		US 5935830 A			10-08-1999
		US 6136601 A			24-10-2000